

Closing in on the future

Professor Tshilidzi Marwala, Vice-Chancellor of the University of Johannesburg and Deputy Chair of the Presidential Commission on the Fourth Industrial Revolution (4IR), shares how Africa can catch up with the rest of the technological world

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What are your thoughts on the perception of Africa in terms of the Fourth Industrial Revolution (4IR)?

Tshilidzi Marwala This morning, as part of my usual routine, I trolled the news sites with my cup of coffee. As my cursor hovered around the 'Africa' tab on The Guardian, I felt a familiar uneasiness take me over. Rarely is this indicative of what the continent has to offer. It is often poverty, famine, disease and conflict that take centre stage. Still, somehow unable to stop myself, I clicked on the link. Ebola, police brutality and terrorism stood out despite a light-hearted piece on

Samuel L Jackson's affinity for this great continent. I chose the Samuel L Jackson interview, unable to stomach much else. "I feel invigorated by Africa, and it makes me feel alive in a way that I don't feel here in the US," he said. "It gives me a sense of belonging in a world that I deserved to be in." This is certainly the perception of Africa I hold dear.

How do we find balance in the narrative?

That isn't to say that the grim news isn't true or necessary. It's a reality. My qualm is that this isn't



56km

The length of a line that an average pencil can draw before it's used up.

do we ensure that it takes centre stage in our narrative?

What's happening in the Africa tech space right now? The reality is that we don't have equitable infrastructure, we have a deep digital divide, and we require solutions to deal with high unemployment. We know with certainty that the 4IR could catapult countries into greater economic buoyancy, addressing massive social development issues at the same time. Indeed, the last six months or so have brought into focus the absolute dependence we have on technologies ranging from artificial intelligence to learning management systems. But while there has been added momentum in the last few years, with meaningful strides being made by countries within Africa to gear up for the 4IR, the jury is out as to whether the pandemic has steered us off course.

What other developments are happening?

There are many exciting examples of how 4IR is fundamentally changing every sphere of society. But we still grapple with the basics like access to clean water, electricity, healthcare and good infrastructure. Africa is diverse, and yet across the continent we face the same challenges. But when we say Africa is playing a game of catch-up, it's not because we don't have the capabilities, the know-how, or that we have not already made strides. Indeed, a report released by Oxford Insights indicated that despite the digital divide and rampant data poverty in Africa, South Africa is one of five countries on the continent that are taking leaps into leveraging technologies to accelerate economic growth with the use of AI. South Africa was even placed 59th globally on the Government AI Readiness Index.

"There is clearly capability and progress on the continent. Why don't we hear more about it?"

What are your biggest worries about Africa's progress?

Although I wear my pride on my sleeve, a growing concern for me has been how Africa has lagged behind as a result of the exponential growth in technology. Across the globe, progress has been defined by the ability of humans to adapt to change. Here, in Africa, we have largely missed that call. We have seen what a knock the continent has taken in being late to the previous three industrial revolutions, where gaps in infrastructure still exist today and where we have not yet been able to unleash our potential. Yet now we find ourselves on the precipice of change.

How do we move forward? Often, the 4IR is perceived to be a bearer of doom contributing to more job losses. What we need is the visioning of education, science, technology, and innovation systems. Technologies should be embraced across communities irrespective of geospatial locations, class differences, and the level of development. As Stephen Hawking once said: "Intelligence is the ability to adapt to change."

our only tale to tell. Beyond the doom and gloom of The Guardian, I fail to see news of other recent developments, such as AI-powered hotels that are becoming possible in South Africa; the Microsoft FarmBeats platform in Nigeria, which is being used to harness sensors, drones and cameras for seamless data collection in the agricultural sector; or even that 11 start-ups were chosen to be part of an AI accelerator in Ghana.

There is clearly capability and progress on the continent. Why don't we hear more about it? And how

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